

of pollen collecting bees, and the same applies exactly to *S. mexicana*. It is of no account whatever for bees. At the same time, however, it does attract great quantities of small diptera and hymenoptera. One day, in the middle of May, I swept an elder tree in a neighboring orchard, and sent the flies to Mr. Coquillett, and the Hymenoptera to Mr. Ashmead. Here are the names as kindly determined by them:

DIPTERA: *Eugnoriste occidentalis* Coq., *Tachydromia postica* Walk., *Chlorops obesa* Fitch, *Agromyza platyptera* Thom., *Micropeza producta* Walk.

HYMENOPTERA: *Ammoplanus lævis* (Prov., as *Anacrabro*), *Hexaplasta zigzag* Riley, *Microterys marginatus* Ashm. n. sp., *Elasmosoma cockerellii* Ashm. n. sp., *Protapanteles monticola* Ashm., *Meteorus vulgaris* Cress., *Lysiphlebus* sp.

It is to be observed with regard to *Eugnoriste occidentalis*, that it is a mycetophilid with a remarkably long proboscis, so far only known from this vicinity, but very abundant here. It visits all sorts of flowers and must possess some importance to them. It is, perhaps, more especially adapted to the smaller Compositæ, like certain of the meloid beetles.—T. D. A. COCKERELL, *Mesilla, New Mexico*.

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#### THE OFFICIAL NOMENCLATURE OF THE ROYAL BOTANICAL GARDEN AND MUSEUM OF BERLIN.

IN a recent number of *Gartenflora*<sup>1</sup> the staff of the Botanical Garden and Museum of Berlin publishes its code of working rules concerning the formation, choice, and application of plant names. After a brief but forcible introduction, describing the present confusion in nomenclature, the unintelligibility of the names used by certain American botanists, the practical rather than theoretical importance of nomenclature in general, and finally the difficulties of a nomenclature reform from the side of the applied sciences, the conclusion is reached that the course of the extreme reformers cannot be followed. The members of the staff state that they are fully aware that it is impossible to secure a uniform nomenclature, but recognize no harm in the fact that certain variations exist and must remain. For these reasons they do not wish to have their rules regarded as laws to be laid upon other botanists by any authority. However, they cannot

<sup>1</sup>*Op. cit.* 46:304. June 1897.



but recommend them earnestly to their colleagues for the establishment of a generally intelligible nomenclature, and particularly one now familiar in the applied branches. Attention is especially called to the close similarity between these rules and those governing the nomenclature of the Kew Index, the only important difference being the priority rule for species. This will affect a difference only in case of species that have been transferred from one genus to another with a concomitant alteration in the specific name, a class not large when compared with all other specific and generic names, upon which there will be practical agreement between the Berlin staff and those of the leading English establishments, not to mention the conservative element in other countries.

The work of the Berlin Garden and its museum needs no encomium. Certainly no other continental institution has in recent years exercised such a wide and lasting influence upon phanerogamic classification. On this account, recommendations emanating from its learned staff are entitled to careful consideration in all parts of the world. The rules may be translated as follows :

1. In the choice of names for the genera and species of plants, the fundamental principle of priority is usually to be maintained. The years 1753-4 are regarded as the point of departure in the determination of priority.

2. A generic name, however, shall be dropped if it has not been in general use during fifty years reckoned from the date of its establishment. Nevertheless, if, in consequence of the *Lois de la nomenclature* of the year 1868, it has been again restored in the preparation of monographs or larger floras, it shall remain current with us.

3. In order to secure uniformity in the group designations of the vegetable kingdom we wish to bring into use the following endings : series shall end in *-ales*, families in *-aceæ*, subfamilies in *-oideæ*, tribes in *-eæ*, subtribes in *-inæ*. The endings are added to the stem of the generic name ; thus, Pandan(us) *-ales* ; Rumex, Rumic(is)-*oideæ* ; Asclepias, Asclepiad(is)-*eæ* ; Metastelma Metastelmat(is)-*inæ* ; Madi(a)-*inæ*.<sup>2</sup>

4. Regarding the gender of generic names, we follow in classical designations the correct grammatical usage, while in later names and barbarisms the usage in the *Natürlichen Pflanzenfamilien* holds good. Changes in ending or in other parts of the word ought not as a rule be made. However, notorious errors in designations derived from proper names must be removed ;

<sup>2</sup> A few exceptions, such as Coniferæ, Cruciferae, Umbelliferae, Palmae, etc., rightly continue to stand.



*e. g.*, one should write *Rülingia* for the *Rulingia* used by the English and introduced with us.

5. Generic names, which have been relegated to synonymy, had better not again be applied in an altered sense to designate new genera or even sections, etc.

6. The choice of specific names shall be determined by priority unless serious objections to its application can be raised by monographers. If a species has been transferred to another genus, it must even there bear the oldest specific name.

7. The author who first named a species, even if it was under another genus, should always be shown, and accordingly his name is to be placed in parenthesis before that of the author who made the transference to the new genus; thus, *Pulsatilla pratensis* (L.) Mill., on account of *Anemone pratensis* L. If an author has himself placed his species in another genus we drop the parenthesis.<sup>3</sup>

8. So far as the manner of writing specific names is concerned, the method followed by Linnaeus has been introduced in the Botanical Garden and Museum. All specific names should be written with small letters, except those derived from personal names and those which are substantives (commonly names of still current or at least formerly recognized genera), *e. g.*, *Ficus indica*, *Circaea lutetiana*, *Brassica Napus*, *Solanum Dulcamara*, *Lythrum Hyssopifolia*, *Isachne Büttneri*, *Sabicea Henningsiana*.

9. If proper names are used in the formation of generic and specific names, we add in case of words ending in a vowel or in *r*, only *a* (for the genus) or *i* (for the species), thus *Glazioua* (from *Glaziou*), *Bureaua* (from *Bureau*), *Schützea* (from *Schütze*), *Kenera* (from *Kerner*), and *Glazioui*, *Bureaui*, *Schützei*, *Keneri*. In case the name ends in *a*, we change this vowel for the sake of euphony to *ae*, thus from *Colla* comes *Collaea*. In all other cases *ia*, or *ii* is appended to the names, thus *Schützia* (from *Schütz*), *Schützii*, etc. This holds also of names ending in *us*, thus *Magnusia*, *Magnusii* (not *Magni*), *Hieronymusia*, *Hieronymusii* (not *Hieronymi*). The adjectival forms of proper names are framed in a corresponding manner, *e. g.*, *Schützeana*, *Schütziana*, *Magnusiana*. A distinction in the application of the genitive and adjectival forms is not at the present time practicable.

10. In the formation of compound Latin and Greek nouns or adjectives the vowel between the stems is a connecting vowel, being in Latin *i*, in Greek *o*. Thus, one should write *menthifolia*, not *menthaefolia*. (Here it is not the genitive of the former stem which enters into combination.)

11. We recommend the avoidance of such combinations of names as involve tautology, *e. g.*, *Linaria Linaria* or *Elvasia elvasioides*. Similarly it is per-

<sup>3</sup> The authors engaged in continuing works in which the parenthesis is not used do not regard themselves bound by this rule.



missible to depart from priority in cases of names which have clearly arisen through gross geographic errors on the part of their authors, as for instance, *Asclepias syriaca* L. (which comes from the United States), and *Leptopetalum mexicanum* Hook et Arn. (from the Liu-Kiu Islands.)

12. Hybrids are designated by the names of the parents directly connected by the sign  $\times$ , the alphabetical order of the specific names being maintained, *e. g.*, *Cirsium palustre*  $\times$  *rivulare*. In the position of the names no distinction is made as to which was the father and which the mother plant. To hybrids we consider the binomial nomenclature unsuited.

13. Manuscript names have no right under any circumstances to consideration on the part of other authors, not even when such names appear upon the printed labels of *exsiccati*. The same thing holds in the case of horticultural names or designations in trade catalogues. The recognition of species presupposes a printed diagnosis, which it is true may occur even upon a label of *exsiccati*.

14. An author has no right to alter at will a once published generic or specific name, unless moved to do so by very weighty reasons, such as those in Rule 11.

Signed by A. Engler, I. Urban, A. Garcke, K. Schumann, G. Hieronymus, P. Hennings, M. Gürke, U. Dammer, G. Lindau, E. Gilg, H. Harms, P. Graebner, G. Volkens, L. Diels.

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### A CONVENIENT POTOMETER.

THE most satisfactory method for the demonstration and exact measurement of the amount of water taken up by transpiring plants or by branches is by the use of the potometer. The simplest form is that used by Darwin and Phillips.<sup>1</sup> Practical instruments have been described by Kohl, Detmer, and others. A modification of Kohl's apparatus, designed in this laboratory, has been found to meet all the requirements of exact measurement, and at the same time is useful in demonstration in the lecture room, where its operations may be witnessed by a class of eighty or one hundred without difficulty. For the latter purpose the apparatus is always ready for use and may be fitted with a plant in five minutes.

The apparatus consists essentially of a horizontal tube of 1<sup>mm</sup> internal diameter, calibrated into portions containing 100<sup>mg</sup> of water. At

<sup>1</sup> DARWIN, *Physiology of Plants*, 73. 1894.